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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,062

02/12/2007

Michael Hopkinson

70347

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85981

7590

12/28/2009

Syngenta Corp Protection, Inc.

410 Swing Road

Greensboro, NC 27409

EXAMINER

BROWN, COURTNEY A

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

12/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,062	Applicant(s) HOPKINSON ET AL.	
	Examiner COURTNEY BROWN	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 9, 2009 has been entered.

Acknowledgement of Receipt/Status of Claims

This Office Action is in response to the amendment filed September 29, 2009. Claims 1-12 are pending in the application. Claim 13 has been cancelled. Claim 11 has been amended. Claims 1-12 are being examined for patentability.

Applicant's arguments, see pages 16-25, filed September 29, 2009, with respect to the rejection(s) of claim(s) 1-12 under 35 USC 103 (a) have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection has been made in this Office Action.

Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They

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constitute the complete set of rejections and/or objections presently being applied to the instant application.

Withdrawn Rejections

The rejection of claims 1-12 under 35 U.S.C. 103(a) as being unpatentable over Wichert et al. (US 6,890,889 B1) in view of Piper et al. (US 2005/0202972 A1) and further in view of Palgrave et al. (US 4,331,490) has been **withdrawn**.

New Rejection(s)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hudson (US Patent 5,704,961) in view of Cones (US 6,924,250 B2).

Applicant's Invention

Applicant claims a pesticide concentrate comprising: a) 2-85% by weight water; b) 5-90% by weight of at least one pesticide; c) an amount of an ionic nitrate salt additive effective in reducing corrosion of metal surfaces and d) optionally, other

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formulation auxiliaries wherein the ratio of component c) to component b) is less than or equal to 0.3:1.

***Determination of the scope and the content of the prior art
(MPEP 2141.01)***

Hudson teaches non-corrosive nitrogen containing fertilizer solutions which contain effective levels of corrosion inhibitors which are monocarboxylic acids or polycarboxylic acids, or their salts, or mixtures thereof (abstract). The compositions of the liquid fertilizer solutions in which the corrosion inhibitors are effective can be any that are commonly sold (column 2, lines 41-45). Hudson teaches that 12-20-0, which is an example of a commercially available solution that containing 11.5% by weight urea, 8.9% by weight monoammonium phosphate, and 27.4% by weight diammonium phosphate; and that 12-6-6, which can be a solution containing **14.0% by weight ammonium nitrate** (component c of instant application), 11.2% by weight urea, 2.7% by weight monoammonium phosphate, 8.2% by weight diammonium phosphate, and **9.7% by weight potassium chloride** (component d of the instant application). Hudson teaches that the solutions may also contain other nutrients or treatment chemicals such as **pesticides** (component b of instant application) and that liquid nitrogen fertilizers containing 28 to 32% N from solutions of urea and ammonium nitrate (UAN) are widely used in agricultural applications (column 2, lines 59-64) Hudson teaches that solutions containing from about **25% to about 60% water** (component a of instant application) by weight are preferred (column 3, line 65 bridging to column 4, lines 1-5). Hudson teaches that the corrosion inhibitors are added to the fertilizer solutions at levels

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adequate to control the corrosion in the system of interest and that the necessary levels will depend upon the materials of construction of the transportation, storage, and application equipment to be protected (column 4, lines 6-12). Hudson further teaches a method of preventing corrosion of metal surfaces by liquid fertilizer solutions that involves **dispersing mono- or polycarboxylic acids or mixtures thereof, or aqueous solutions of water soluble salts thereof into the fertilizer** by any suitable mixing or dispersing method (column 4, lines 13-21). According to the data test results shown, when comparing compositions at a pH of 6.8, 7.0 and 7.2, Hudson teaches that corrosion protection is retained **at lower pH values** which would result if the solutions were stored for long periods and the ammonia was allowed to vent (column 6, table 4, lines 50-end).

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

The difference between the invention of the instant application and that of Hudson is that Hudson does not expressly teach the use of 5-90% of a copper or zinc chelate of mesotrione. This deficiency in Hudson is cured by the teachings of Cornes. Cornes teaches that formulations comprising mesotrione may contain as little as about **0.5% to as much as 95%** or more in a synergistic combination of mesotrione and a second herbicide (column 4, lines 25-29). Cornes teaches that, when used in the form

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of a chelate, mesotrione is most preferably used in the form of a **copper chelate** (column 2, lines 11-16).

The difference between the invention of the instant application and that of Hudson is that Hudson does not expressly teach the claimed ratio of the ionic nitrate salt additive to the pesticide component wherein the ratio is less than or equal to 0.3:1. Hudson teaches the use of 14% by weight of ammonium nitrate (component C) and 9.7% KCl (component D) and 25-60% water (component A) and that pesticides can be added. Thus, when C=14, D=9.7 and A= 25, A+C+D= 48.7 wherein the rest of the composition could be pesticide which at about 50.3%. Thus, the ratio of the ammonium nitrate component (C) to pesticide (B) is 14 to 50 which is about 0.3:1. Further, . Cornes teaches that formulations comprising mesotrione may contain as little as about 0.5% to as much as 95% which encompass 50%.

The difference between the invention of the instant application and that of Hudson is that Hudson does not expressly teach a pH of 6 or less as instantly claimed.

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Hudson (US Patent 5,704,961) in view of Cones (US 6,924,250 B2) and use about 0.5% to as much as 95% or more in a synergistic

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combination of a copper chelate of mesotrione and a second herbicide . Hudson teaches that ammonium nitrate is used as a corrosion inhibitor and can be used in solutions that may also contain other nutrients or treatment chemicals such as pesticides . Cornes teaches that formulations comprising mesotrione may contain as little as about 0.5% to as much as 95% or more in a synergistic combination of mesotrione and a second herbicide (column 4, lines 25-29). Thus, one would be motivated to devise a composition that would provide a herbicidal synergistic combination as well as prevent corrosion. The claims would have been obvious because a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and that there would have been a reasonable expectation of success. Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited reference.

Regarding the claimed pH, Hudson teaches that corrosion protection is retained at **lower pH values** when comparing compositions in a pH range of 6.8 and 7.2 which would result if the solutions were stored for long periods and the ammonia was allowed to vent (column 6, table 4). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable pH ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the

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optimum or workable ranges by routine experimentation. In re Aller, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).

Regarding the claimed ratio of the ionic nitrate salt additive to the pesticide component wherein the ratio is less than or equal to 0.3:1. Hudson teaches that the use of 14.0% by weight ammonium nitrate as a corrosion inhibitor in a composition that can also comprise pesticidal active. Cornes teaches that formulations comprising mesorhizone may contain as little as about 0.5% to as much as 95%. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to engage in routine experimentation to determine optimal or workable ratio ranges that produce expected results. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F. 2d 454, 105 USPQ 233 (CCPA 1955).

In light of the foregoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Examiner's Response to the 37 C.F.R. Declarations

Applicant's Declaration of Facts Filed Under 37 C.F.R. 1.132 filed on September 29, 2009 have been fully considered but are moot in view of a new grounds of rejection.

Examiner's Response to Applicant's Remarks

Applicant's arguments filed on September 29, 2009, with respect to the 103 rejection of claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wichert et al. (US 6,890,889 B1) in view of Piper et al. (US 2005/0202972 A1) and further in view of Palgrave et al. (US 4,331,490) have been considered but are moot in view of a new grounds of rejection.

Conclusion

The claims remain rejected.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

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PAIR. Status information for unpublished applications is available through Private PAIR Only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electron Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Courtney Brown, whose telephone number is 571-270-3284. The examiner can normally be reached on Monday-Friday from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Courtney A. Brown
Patent Examiner
Technology Center1600
Group Art Unit 1616

/Ernst V Arnold/
Primary Examiner, Art Unit 1616